

NON-PUBLIC?: N  
ACCESSION #: 9001220235  
LICENSEE EVENT REPORT (LER)

FACILITY NAME: Oyster Creek Unit 1 PAGE: 1 OF 3

DOCKET NUMBER: 05000219

TITLE: Reactor Scram due to Turbine Trip as a Result of Personnel Error  
During Surveillance Test  
EVENT DATE: 09/22/89 LER #: 89-021-01 REPORT DATE: 01/12/90

OTHER FACILITIES INVOLVED: DOCKET NO: 05000

OPERATING MODE: POWER LEVEL:

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR  
SECTION:  
50.73(a)(2)(iv)

LICENSEE CONTACT FOR THIS LER:  
NAME: M. Godknecht, Plant Engineering TELEPHONE: 609 971-4189

COMPONENT FAILURE DESCRIPTION:  
CAUSE: SYSTEM: COMPONENT: MANUFACTURER:  
REPORTABLE NPRDS:

SUPPLEMENTAL REPORT EXPECTED: NO

ABSTRACT:

On September 22, 1989, at approximately 1418 hours, mechanical test equipment was inadvertently left connected to one of the reactor pressure vessel (RPV) water level instruments after testing was complete. While being placed back in service, the reference leg of the instrument was vented to the test equipment causing a false high RPV water level signal to be generated in all five level instruments attached to that common reference leg. The false high RPV water level caused a trip of the turbine generator which resulted in a reactor scram. The technician performing the valve manipulation recognized the problem and closed the root valve. The cause of this event was personnel error since the test equipment was not removed as required by the surveillance procedure. This event had minimal safety significance because the Reactor Protection System is designed to protect the reactor from any turbine trip condition, and the excess flow check valves in the instrument line would have prevented any significant loss of coolant. All engineered safety

features would have functioned normally due to redundant RPV level instrumentation. All instruments involved in this event were calibration checked to ensure no problems had resulted from the momentary depressurization. The technicians involved in this event were counseled.

END

F ABSTRACT

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DATE OF OCCURRENCE

This event occurred on September 22, 1989, at approximately 1418 hours.

IDENTIFICATION OF OCCURRENCE

While performing a surveillance on the reactor pressure vessel (RPV) level instrumentation (EIIS-JC-LT), mechanical test equipment was inadvertently left connected to one of the level instruments, contrary to procedure requirements, after testing of that instrument was complete. While the instrument was being placed back in service, the reference leg of the instrument was vented to the installed test equipment depressurizing that leg of the instrument loop and causing a high RPV water level signal to be generated in all five level instruments attached to that loop. The high RPV water level signals caused a trip of the turbine generator (EIIS TA) which resulted in an anticipatory reactor scram on turbine stop valve closure. The closure of the turbine stop valves also caused a reactor pressure spike of 1077 psig which resulted in the following safety system actuations: Initiation of both isolation condensers (EIIS-BL) and electromatic relief valves (EMRV) A,B,D and E (EIIS-JERV) and an automatic trip of the reactor recirculation pumps (EIIS-ADP). The turbine trip also resulted in an automatic start of the emergency diesel generators (EIIS-EKDG). All safety systems/components operated as designed. This event is considered reportable under 10CFR50.73(a)(2)(iv).

CONDITIONS PRIOR TO OCCURRENCE

The reactor was at 99.6% power, with a generator load of approximately 636 megawatts electric.

DESCRIPTION OF OCCURRENCE

While performing a Reactor High/Low Level Instrument Test and Calibration surveillance, two instrument and control (I&C) technicians missed a step in the procedure while returning an instrument to service. The missed

step required that the installed test equipment be removed and the test plugs be reinstalled on the instrument. When the instrument reference leg root valve was opened in accordance with the procedure, the reference leg of this and four other instruments was vented to the installed test equipment. All five instruments sensed a false high water level condition due to the differential pressure set up by this event. This false high RPV water level condition energized the turbine generator trip circuit closing the turbine stop valves. Because reactor power was greater than 40%, an anticipatory scram signal was generated by the closure of the turbine stop valves. Hearing the sound of high pressure being vented, the I&C Technician performing the valve manipulation recognized the problem and closed the root valve. The I&C Technicians then notified the Control Room of what had happened during the surveillance.

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#### APPARENT CAUSE OF OCCURRENCE

The cause of this event has been determined to be personnel error. The I&C Technicians failed to perform the steps as required by the surveillance procedure. Because the test equipment was not removed and test plugs were not reinstalled, the reference leg of five RPV water level instruments was vented to the test equipment, setting up a false RPV high water condition in those five instruments. High level signals from 2 of the 5 instruments resulted in a turbine trip and subsequent reactor scram.

#### ANALYSIS OF OCCURRENCE AND SAFETY SIGNIFICANCE

The protective circuitry of both the Reactor Protection System and the turbine generator responded as designed during this event. The excess flow check valves in the instrument line that was depressurized would have prevented any significant loss of coolant even if the I&C technician had not recognized the problem and immediately closed the instrument root valve he was opening.

This event is determined to have minimal safety significance because a turbine trip from 100% power is within the design of the Reactor Protection system (EIS-JC) and the instrument line excess flow check valves would have prevented any significant loss of coolant even if the technician had not immediately closed the root valve. The Engineered Safety Features (EIS-JE) receiving signals from the affected RPV level instrumentation would have functioned normally because of the redundant level instruments sensing RPV level via different instrument reference legs.

## CORRECTIVE ACTION

1. The surveillance was completed satisfactorily and all five instruments involved in this event were calibration checked to ensure no problems had resulted from the momentary depressurization.
2. The excess flow check valve for the instrument line depressurized was verified to be open.
3. The two I&C technicians involved in this incident have been counseled and this event report will be made required reading for all I&C technicians.

## SIMILAR EVENTS

LER 87-45 SGTS Initiation Due to Water Accumulation in AOG System.

LER 88-08 SGTS Initiation by Procedural Noncompliances.

ATTACHMENT 1 TO 9001220235 PAGE 1 OF 1

GPU Nuclear Corporation  
Post Office Box 388  
Route 9 South  
Forked River, New Jersey 08731-0388  
609 971-4000  
Writer's Direct Dial Number:

January 12, 1990

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, D.C. 20555

Dear Sir:

Subject: Oyster Creek Nuclear Generating Station  
Docket No. 50-219  
Licensee Event Report

This letter forwards one (1) copy of Licensee Event Report (LER) No. 89-021, Revision 1. This revision provides additional information which is indicated by a bar in the right hand margin.

Very truly yours,

E.E. Fitzpatrick  
Vice President and Director  
Oyster Creek

EEF/BDeM(3)-LTRS/jc

Enclosure

cc: Mr. William T. Russell, Administrator  
Region 1  
U.S. Nuclear Regulatory Commission  
475 Allendale Road  
King of Prussia, PA 19406

NRC Resident Inspector  
Oyster Creek Nuclear Generating Station

Mr. Alexander Dromerick  
U.S. Nuclear Regulatory Commission  
Mail Station P1-137  
Washington, DC 20555

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